Claims:

1. A method of depositing a silicon germanium film on a substrate comprising:

placing the substrate within a process chamber;

heating the substrate to a temperature in a range from about 500°C to about 900°C;

maintaining a pressure in a range from about 0.1 Torr to about 200 Torr;

providing a deposition gas comprising SiH_4, GeH_4, HCl, a carrier gas and at least one dopant gas; and

depositing the silicon germanium film epitaxially on the substrate.

2. The method of claim 1, wherein the at least one dopant gas is a boron containing compound selected from the group consisting of BH_3, B_2H_6, B_3H_8, Me_3B, Et_3B and derivatives thereof.

3. The method of claim 2, wherein the silicon germanium film is deposited with a boron concentration in a range from about 1×10^{20} atoms/cm^3 to about 2.5×10^{21} atoms/cm^3.

4. The method of claim 1, wherein the at least one dopant gas includes an arsenic containing compound or a phosphorus containing compound.

5. The method of claim 1, wherein the carrier gas is selected from the group consisting of H_2, Ar, N_2, He and combinations thereof.

6. The method of claim 5, wherein the deposition gas further comprises a member selected from the group of consisting of a carbon source, Cl_2SiH_2 and combinations thereof.

7. The method of claim 5, wherein the temperature is in a range from about 600°C to about 750°C.

8. The method of claim 5, wherein the silicon germanium film is grown to a thickness in a range from about 100 Å to about 3,000 Å.

9. The method of claim 8, wherein the silicon germanium film is deposited within a device used for CMOS, Bipolar or BiCMOS application.

10. The method of claim 9, wherein a fabrication step is selected from the group consisting of contact plug, source/drain extension, elevated source/drain and bipolar transistor.

11. The method of claim 1, wherein the silicon germanium film is deposited to a first thickness, therein SiH_4 is replaced by Cl_2SiH_2, and a second silicon germanium film is deposited to a second thickness on the silicon germanium film.

12. The method of claim 1, wherein a silicon-containing film is deposited to the substrate before the silicon germanium film.

13. The method of claim 12, wherein the silicon-containing film is deposited from a process gas comprising Cl_2SiH_2.

14. A selective epitaxial method for growing a silicon germanium film on a substrate comprising:

placing the substrate within a process chamber at a pressure in a range from about 0.1 Torr to about 200 Torr;

heating the substrate to a temperature in a range from about 500°C to about 900°C;

providing a deposition gas comprising SiH_4, a germanium source, an etchant source, a carrier gas and at least one dopant gas; and

growing selectively the silicon germanium film with a dopant concentration in a range from about 1×10^{20} atoms/cm^3 to about 2.5×10^{21} atoms/cm^3.

15. The method of claim 14, wherein the germanium source is selected from the group consisting of GeH_4, Ge_2H_6, Ge_3H_8, Ge_4H_{10} and derivatives thereof.

16. The method of claim 15, wherein the carrier gas is selected from the group consisting of H_2, Ar, N_2, He and combinations thereof.

17. The method of claim 16, wherein the temperature in a range from about 600°C to about 750°C.

18. The method of claim 17, wherein the etchant source is selected from the group consisting of HCl, $SiCl_4$, CCl_4, H_2CCl_2, Cl_2, derivatives thereof and combinations thereof.

19. The method of claim 14, wherein the at least one dopant gas is a boron containing compound selected from the group consisting of BH_3, B_2H_6, B_3H_8, Me_3B, Et_3B and derivatives thereof.

20. The method of claim 14, wherein the at least one dopant gas is selected from the group consisting of an arsenic containing compound and a phosphorus containing compound.

21. The method of claim 14, wherein the deposition gas further comprises a member selected from the group consisting of a carbon source, Cl_2SiH_2 and combinations thereof.

22. The method of claim 17, wherein the silicon germanium film is grown to a thickness in a range from about 100 Å to about 3,000 Å.

23. The method of claim 22, wherein the silicon germanium film is deposited within a device used for CMOS, Bipolar or BiCMOS application.

24. The method of claim 23, wherein a fabrication step is selected from the group consisting of contact plug, source/drain extension, elevated source/drain and bipolar transistor.

25. The method of claim 14, wherein the silicon germanium film is deposited to a first thickness, therein SiH_4 is replaced by Cl_2SiH_2, and a second silicon germanium film is deposited to a second thickness on the silicon germanium film.

26. The method of claim 14, wherein a silicon-containing film is deposited to the substrate before the silicon germanium film.

27. The method of claim 26, wherein the silicon-containing film is deposited from a process gas comprising Cl_2SiH_2.

28. A selective epitaxial method for growing a silicon-containing film on a substrate comprising:

placing the substrate within a process chamber at a pressure in a range from about 0.1 Torr to about 200 Torr;

heating the substrate to a temperature in a range from about 500°C to about 900°C;

providing a deposition gas comprising SiH_4, HCl and a carrier gas; and

growing the silicon-containing film at a rate between about 50 Å/min and about 600 Å/min.

29. The method of claim 28, wherein the deposition gas further comprises at least one dopant gas.

30. The method of claim 29, wherein the at least one dopant gas is a boron containing compound selected from the group consisting of BH_3, B_2H_6, B_3H_8, Me_3B, Et_3B and derivatives thereof.

31. The method of claim 30, wherein the silicon-containing film is deposited with a boron concentration in a range from about 1×10^{20} atoms/cm^3 to about 2.5×10^{21} atoms/cm^3.

32. The method of claim 28, wherein the at least one dopant gas includes an arsenic containing compound or a phosphorus containing compound.

33. The method of claim 28, wherein the carrier gas is selected from the group consisting of H_2, Ar, N_2, He and combinations thereof.

34. The method of claim 33, wherein the temperature is in a range from about 650°C to about 800°C.

35. The method of claim 28, wherein the deposition gas further comprises a member selected from the group of consisting of a carbon source, Cl_2SiH_2 and combinations thereof.

36. The method of claim 28, wherein the silicon-containing film is deposited within a device used for CMOS, Bipolar or BiCMOS application.

37. The method of claim 36, wherein a fabrication step is selected from the group consisting of contact plug, source/drain extension, elevated source/drain and bipolar transistor.

38. The method of claim 28, wherein the silicon-containing film is deposited to a first thickness, therein SiH_4 is replaced by Cl_2SiH_2, and a second silicon-containing film is deposited to a second thickness on the silicon-containing film.

39. The method of claim 28, wherein a second silicon-containing film is deposited to the substrate before the silicon-containing film.

40. The method of claim 39, wherein the second silicon-containing film is deposited from a process gas comprising Cl_2SiH_2.

41. A selective epitaxial method for growing a silicon-containing film on a substrate comprising:

placing the substrate within a process chamber at a pressure in a range from about 0.1 Torr to about 200 Torr;

heating the substrate to a temperature in a range from about 500°C to about 900°C;

providing a deposition gas comprising Cl_2SiH_2, HCl and a carrier gas;

depositing a silicon-containing layer on the substrate;

providing a second deposition gas comprising SiH_4, HCl and a second carrier gas; and

depositing a second silicon-containing layer on the silicon-containing layer.

42. A method of depositing a silicon-containing film on a substrate comprising:

placing the substrate within a process chamber;

heating the substrate to a temperature in a range from about 500°C to about 900°C;

maintaining a pressure in a range from about 0.1 Torr to about 200 Torr;

providing a deposition gas comprising a silicon-containing gas, a germanium source, HCl, at least one dopant gas and a carrier gas selected from the group consisting of N_2, Ar, He and combinations thereof; and

depositing selectively the silicon-containing film epitaxially on the substrate.